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MUSKMELON CULTIVAR EVALUATION TRIALS

Dale W. Kretchman, Mark A. Jameson, and Charles C. Willer

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Department of Horticulture
The Ohio State University
Ohio Agricultural Research and Development Center

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Muskmelon Cultivar Evaluation Trials for 1986

Dale W. Kretchman, Mark A. Jameson, and Charles C. Willer
Department of Horticulture
The Ohio State University
Ohio Agricultural Research and Development Center

Muskmelon cultivars were evaluated during the summer of 1986 at the Ohio Agricultural Research and Development Center Vegetable Crops Branch near Fremont. Nine lines and hybrids were compared in replicated plots. Ten lines and hybrids were observed in non-replicated plots.

Cultural Information

Plant Growing: Seeds were sown in 2 1/4 in. sq. peat pots on May 19. Pots contained a mixture of 1/3 each, soil, peat and sand. Two plants were grown per pot. Plants were field set by hand on June 12.

Field Culture: 750 lbs/A of 10-20-20 was broadcast and worked in prior to planting and laying the plastic. Four-ft. wide, 1.5 mil black plastic mulch was laid on 6 ft. centers immediately before transplanting. Rows were 30 ft. long and the 2-plant pots were spaced 30 in. apart. There were 4 replications of each cultivar in the replicated trial. One-half pint of starter solution of 1 qt/55 gal. of 10-34-0 was added to each hill at planting. All other cultural practices during the season were according to standard recommendations.

| | | |
|------------------|----------------|----------|
| <u>Rainfall:</u> | June 12 to 30 | 1.28 in. |
| | July | 5.35 in. |
| | August | 2.79 in. |
| | to September 8 | .26 in. |

Harvest: Started August 3 and continued through September 8.

Results and Discussion

Results are presented in Tables 1-3. There are some rather obvious differences in yield and quality. There appears to be no outstanding candidates from these entries to be looked at further. Gold Star was the standard check cultivar and it still had adequate yields of high quality melons with the ribbing and netting associated with mid-west and eastern melons. A honeydew type that appears worthy of further trial was Rajandew from Northrup-King.

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1/87-S444/200

Seed Source

| Cultivar or Line | Lot No. | Source |
|------------------|-------------|--|
| Casso | 41003-86000 | Northrup King Co., Gilroy, CA |
| Challenger | 41034-14460 | Northrup King Co., Gilroy, CA |
| Columbia | 83GH7/6 | Northrup King Co., Gilroy, CA |
| Conquistador | 41011-85000 | Northrup King Co., Gilroy, CA |
| Explorer | 83GH14/12 | Northrup King Co., Gilroy, CA |
| Gold Star | 562-46082 | Harris-Moran Seed Co., Rochester, NY |
| Market Star | 193 | Stokes Seeds Inc., Buffalo, NY |
| Nova | CR84 | Northrup King Co., Gilroy, CA |
| Rajandew | 41200-86000 | Northrup King Co., Gilroy, CA |
| Superstar | 577-46053 | Harris-Moran Seed Co., Rochester, NY |
| Zenith | ---- | Sunseeds, Hollister, CA |
| Libex SS114 | ---- | Liberty Seed Co., New Philadelphia, OH |
| Libex SS125 | ---- | Liberty Seed Co., New Philadelphia, OH |
| HXP-3592 | 77676-56801 | Harris-Moran Seed Co., Rochester, NY |
| PSR-2685 | ---- | Petoseed Co., Saticoy, CA |
| PSR-10084 | ---- | Petoseed Co., Saticoy, CA |
| PSX-680 | ---- | Petoseed Co., Saticoy, CA |
| XPH-5361 | ---- | Asgrow Seed Co., Kalamazoo, MI |
| XPH-5362 | ---- | Asgrow Seed Co., Kalamazoo, MI |

TABLE 1. Harvest date, yield, grade and fruit size of muskmelon, Replicated Trial, Fremont - 1986.

| Cultivar | Early Yield for Period 8/8-18 | | | | Season Total Yield | | | Fruit SS(%) | | Flavor Rate** |
|--------------|-------------------------------|------------------|-------|-------|--------------------|-------|-------|-------------|------|---------------|
| | First | Marketable Fruit | | | Marketable Fruit | | | Time | Time | |
| | Harvest | cwt/ | Size | % | Cwt/ | Size | % | Time | Time | |
| | Date | A | (lbs) | Culls | A | (lbs) | Culls | 1 | 2 | |
| Libex SS-114 | 8/15 | 71.4 | 7.8 | 20.3 | 508.2 | 7.6 | 22.7 | 9.0 | 10.0 | 4 |
| Libex SS-125 | 8/15 | 25.5 | 6.0 | 9.0 | 488.0 | 6.0 | 14.1 | 9.1 | 12.6 | 3 |
| PSX-680 | 8/18 | 4.8 | 4.0 | 32.4 | 392.1 | 4.6 | 8.1 | 12.2 | 12.7 | 4 |
| HXP-3592 | 8/8 | 102.1 | 5.2 | 12.7 | 483.1 | 5.2 | 16.9 | 12.1 | 13.0 | 1 |
| Gold Star | 8/18 | 0 | 0 | 0 | 402.0 | 4.8 | 22.0 | 10.0 | 12.6 | 2 |
| Superstar | 8/15 | 14.1 | 5.8 | 42.5 | 547.6 | 6.9 | 11.4 | 9.4 | 11.3 | 2 |
| Nova | 8/18 | 20.9 | 8.6 | 13.3 | 534.3 | 6.0 | 7.3 | 11.5 | 8.1 | 4 |
| Explorer | 8/18 | 0 | 0 | 0 | 457.2 | 3.1 | 8.4 | 7.2 | 12.8 | 4 |
| Columbia | 8/18 | 3.1 | 5.1 | 39.0 | 339.4 | 4.2 | 8.7 | 10.8 | 12.0 | 1.5 |
| LSD 5% | | | | | 114.07 | | 8.08 | | | |

* Dates of measurement of soluble solids (sugars) in extracted juice = time 1 - 8/21, Time 2 = 8/27.

**Flavor ratings made on 8/27/86: 1 = excellent muskmelon flavor; 2 = sweet or very sweet; 3 = bland or flat; 4 = off-flavor (bitter or undesirable).

TABLE 2. Harvest date, yield, grade and fruit size of muskmelon - Observational Trials, Fremont - 1986.

| Cultivar | Early Yield for Period 8/8-18 | | | | Season Total Yield | | | Fruit | |
|--------------|-------------------------------|------------------|------------|---------|--------------------|------------|---------|-----------------|---------------|
| | First | Marketable Fruit | | % Culls | Marketable Fruit | | | Soluble Solids* | Flavor Rate** |
| | Harvest Date | Cwt/A | Size (lbs) | | Cwt/A | Size (lbs) | % Culls | | |
| PSR-2685 | 8/25 | 0 | 0 | 0 | 498.0 | 8.6 | 7.6 | 9.0 | 2.5 |
| PSR-10084 | 8/15 | 31.4 | 4.3 | 40.0 | 348.0 | 5.6 | 24.7 | --- | 3 |
| Zenith | 8/22 | 0 | 0 | 0 | 348.0 | 5.5 | 24.0 | 14.7 | 3 |
| Market Star | 8/22 | 0 | 0 | 0 | 170.1 | 4.7 | 13.9 | 14.0 | 2 |
| Conquistador | 8/20 | 0 | 0 | 0 | 387.4 | 5.5 | 16.6 | 11.0 | 3 |
| Challenger | 8/23 | 0 | 0 | 0 | 647.3 | 3.6 | 5.0 | 12.0 | 1 |
| Rajandew | 8/20 | 0 | 0 | 0 | 260.3 | 6.3 | 35.6 | 15.0 | 1 |
| Casso | 8/29 | 0 | 0 | 0 | 121.5 | 5.0 | 56.0 | 15.5 | 2 |
| XPH-5361 | 8/18 | 75.2 | 6.2 | 0 | 416.5 | 5.4 | 4.4 | 12.2 | 2 |
| XPH-5362 | 8/20 | 0 | 0 | 0 | 514.5 | 6.2 | 26.1 | 12.5 | 2 |

* Soluble solids rated on 8/27/86

**Flavor rating on 8/27/86: 1 = excellent melon flavor; 2 = sweet or very sweet; 3 = bland or flat; 4 = off flavor (bitter or undesirable).

TABLE 3. Additional Observations.

| Cv or Line | Comments |
|--------------|---|
| Libex SS-114 | Shallow ribbing, fine netting, deep salmon flesh color, large seed cavity, oblong shape, poor uniformity. |
| Libex SS-125 | Deeply ribbed, heavy netting, medium yellow flesh color, medium seed cavity, round, poor uniformity. |
| PSX-680 | Deeply ribbed, med. to heavy netting, deep salmon flesh color, med. large seed cavity, round, poor uniformity. |
| HXP-3592 | Medium ribbing, heavy to light netting, medium yellow flesh color, med. to large seed cavity, large flat on side, fair uniformity. |
| Gold Star | Deeply ribbed, heavy netting, deep orange flesh color, moderate sized seed cavity, slightly oblong, good mellow flavor, standard melon. |
| Superstar | Deeply ribbed, heavy netting, light orange flesh color, large seed cavity, slight cracking stem end, tend flat sided, large melon, mostly round, poor uniformity. |
| Nova | Shallow ribbing, med. heavy netting, medium orange flesh color, small seed cavity, very oblong, fair uniformity. |
| Explorer | Non-ribbed, heavy netting, light yellow flesh color, medium seed cavity, western melon, round, good uniformity. |
| Columbia | Shallow ribbing, fine netting, med. to dark orange flesh color, medium seed cavity, western type melon, good uniformity. |
| PSR-2685 | Large deeply ribbed, heavy netting, blossom end has a slight protrusion (1/4 inch), light orange flesh color, small seed cavity. |
| PSR-10084 | Deeply ribbed, heavy netting, medium to light orange color, large seed cavity, round, slight cracks near stem end, not impressive. |
| Zenith | Deeply ribbed, round, poorly netted, light yellow flesh color, small seed cavity, very poor uniformity. |
| Market Star | Shallow ribbing, medium netting, oblong, cracks near stem end, deep orange flesh color, medium seed cavity, not impresses with this melon. |
| Conquistador | Shallow ribbing, shallow netting, cracks at stem end, medium yellow flesh color, medium seed cavity. |
| Challenger | Non-ribbed, heavy netting, slightly oblong, western melon. |
| Rajandew | Honeydew type, light cream color, stem end protrudes slightly, nearly a slip type, large cavity, worthy of further trial. |
| Casso | Round honeydew type, cream colored with light green spots. |
| XPH-5361 | Shallow ribbing, moderate netting, oblong, large seed cavity, light yellow color, not impressive. |
| XPH-5362 | Prominent shallow ribs, shallow netting, round to oblong, blossom end protrudes, not impressive. |

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